Sanitized Copy Approved for Release 2011/09/21 : CIA-RDP80-00809A000700010553-5

SECRET

50X1-HUM

CLASSIFICATION S-E-C-R-E-T

CENTRAL INTELLIGENCE AGENCY
INFORMATION FROM
FOREIGN DOCUMENTS OR RADIO BROADCASTS

REPORT

CD NO.

COUNTRY	USSR	DATE OF INFORMATION	1951
SUBJECT	Scientific - Agriculture, soil science	DATE DIST.	10 Oct 1951
HOW PUBLISHED	Daily newspapers		
WHERE PUBLISHED	USSR	NO. OF PAGES	3
DATE PUBLISHED	9 - 29 Jun 1951	SUPPLEMENT TO REPORT NO.	
LANGUAGE	Russian		

THIS DOCUMENT CONTAINS INFORMATION AFFECTING THE NATIONAL DEFENSE OF THE UNITED STATES WITHIN THE MEANING OF ESPIONAGE ACT 50 U. S. C., 31 AND 32, AS AMENDED. ITS TRANSMISSION OR THE REVELATION OF ITS CONTENTS IN ANY MANNER TO AN UNAUTHORIZED PERSON IS PROHIBITED BY LAW. REPRODUCTION OF THIS FORM IS PROHIBITED.

THIS IS UNEVALUATED INFORMATION

SOURCE Newspapers as indicated.

DATA ON USSR SOIL SCIENCE, AS OF JUNE 1951

/Numbers in parentheses refer to appended sources./

USSR

At the 22 June 1951 meeting of the Presidium of the Academy of Sciences USSR, Academy Member I. V. Tyurin and Professor M. G. Chizhevskiy spoke about a new agrobiological method developed by Soviet scientists for basically improving solonets soils.

Existing methods of meliorating solonets soils require the application of a considerable amount of gypsum. The new method, which requires no gypsum, is based on the principle of biochemical utilization of the calcium carbonate contained in the soil itself. This is accomplished by plowing 35-40 centimeters deep, followed by deep cultivation of the ground. As a result of such plowing, a change takes place in the saline composition of the soil; then, irrigation washes the salts out of the plowed layer. Harvests of wheat, perennial grasses, beets, and other crops would be almost twice as great after this method of plowing than after ordinary plowing.

Academician I. P. Bardin, Vice-President of the academy, pronounced the suggested method very interesting and scientifically sound. The Presidium of the Academy of Sciences USSR took note of the national economic significance of the new method and acknowledged the necessity of continuing work in this direction on a wide scale.(1)

Lithuanian SSR

M. M. Katsas, director of the Agrochemical Station, Agricultural Institute, Academy of Sciences Lithuanian SSR points out that there are vast areas of podsolic soil in the Lithuanian SSR. The excess acidity of these soils has a detrimental effect on the growth and development of agricultural crops. To improve podsolic soils and increase their productivity, it is necessary to lime them.

CLASSIFICATION S-E-C-R-E-T SECRET

STATE	X	NAVY	X	NSRB
ARMY	X	AIR	X	FBI

DISTRIBUTION

Sanitized Copy Approved for Release 2011/09/21 : CIA-RDP80-00809A000700010553-5

Sanitized Copy Approved for Release 2011/09/21 : CIA-RDP80-00809A000700010553-5

The experiments of Soviet scientists have shown that proper liming increases the grain harvest by 2-6 centners per hectare, the hay and perennial grass harvest by 10-15 centners per hectare, and the vegetable-beet harvest by 30-80 centners per hectare. Experimental stations in the republic have found that liming increased the oats harvest by 2.7 centners of grain and 5.6 centners of straw per hectare, almost doubled the feed-beet harvest, increased the clover-hay harvest by 50 centners per hectare, and raised the winter-rye harvest by 4.1 centners per hectare. Liming also increased the potato harvest considerably.

The benefit obtained from liming depends on proper application. The amount of lime to be applied must be determined by the acidity and texture of the soil. Under identical acidity conditions, heavy soils will require a larger dosage than light soils. Thus, when moderately acid, clayey loam soils will require 4-6 tons of lime per hectare, sandy and sandy loam soils will require 2-4 tons per hectare.

To neutralize the physiological acids of fertilizers, 1.3 centners of lime should be applied per centner of sulfate ammonia, and 0.1 centner of lime per centner of superphosphate. These small applications of lime will not reduce soil acidity, but will retard further acidification of the soil and also increase the harvest of agricultural crops.

For liming the soil, highest priority should be given to various friable types of lime which do not require grinding or calcination. Such types are lime tuff, lake lime, marl, chalky marl, and natural dolomite meal.

In the Vil'nyus area, sizable lime tuff deposits are found at Koplichniki, Mozurishki, Novaya Reva, and Antakal'chyay. They contain almost 90 percent calcium carbonate and 2-3 percent magnesium. Lake lime is found in dry lakes and swamps. It consists almost entirely of calcium carbonate. Chalky marl is found in the area south of Vil'nyus. It contains up to 80 percent calcium carbonate. Considerable quantities of friable lime, partly covered with peat, have been discovered in the Trakay area.

It is also possible to use peat tuff and marl peat for liming the soil. If they contain less than 6 percent calcium, they should be applied at the rate of 40-60 tons per hectare. Chalk, in ground or unground form, is another good material for liming the soil.

Calcined lime is especially good for heavy podsol soils. One ton of this replaces two tons of ground limestone. It should not be used on sandy soils.(2)

Georgian SSR

The Institute of Soil Science, Agrochemistry, and Melioration of the Academy of Sciences Georgian SSR has compiled soil maps of the republic. The maps depict the productive qualities of the soils and their suitability for grain crops, vineyards, subtropical crops, and other purposes.

The maps indicate the changes which have taken place in the soils as a result of measures taken by the Soviet government to transform nature.(3)

Sanitized Copy Approved for Release 2011/09/21 : CIA-RDP80-00809A000700010553-5

Sanitized Copy Approved for Release 2011/09/21 : CIA-RDP80-00809A000700010553-5

50X1-HUM

SOURCES

1. Tbilisi, Zarya Vostoka, 29 Jun 51

2. Vil'nyus, Sovetskaya Litva, 27 Jun 51

3. Moscow, Izvestiya, 9 Jun 51

- E N D -

Sanitized Copy Approved for Release 2011/09/21 : CIA-RDP80-00809A000700010553-5